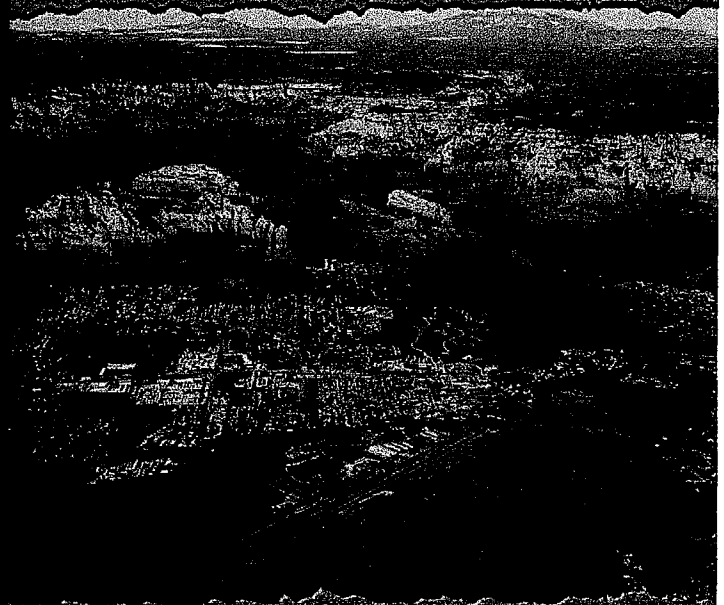


# SEDONA AIRPORT



MASTER PLAN  
(1997-2017)

## AIRPORT INVENTORY

## Chapter 2

# INVENTORY AND EXISTING CONDITIONS

### 2.1 INTRODUCTION

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This Airport Master Plan Study requires the collection, compilation and evaluation of various kinds of data relating to Sedona Airport, the City of Sedona, Village of Oak Creek, and the surrounding area. Every effort is made to identify and obtain all relevant data pertaining to the airport and the community. This broad spectrum of information is intended to provide a complete understanding of the nature and character of the community, as well as the physical and operational characteristics of the airport. Information was collected from a variety of sources and includes the following types of data:

- Physical inventories and descriptions of facilities available and services provided at the airport.
- Background information pertaining to the airport, the City of Sedona, Yavapai and Coconino Counties.
- Population and other socioeconomic statistics which might provide an indication of future development and economic activity in the area.
- A comprehensive review of the existing local and regional plans and studies to determine their potential influence on the development of the Airport.

Early identification of airport issues facilitates the concept of the master plan's approach. The Planning Advisory Committee at their initial meeting identified preliminary airport issues of greatest concern:

- |  |  |
|--|--|
| • Noise  | • Hangar/Tiedown Demand                    |
| • FAA Design Standards for upgrades to Airport Reference Code (ARC) B-II | • Pavement Conditions/ Maintenance Program |
| • Aircraft Fueling   | • Funding                                  |
|  | • Rates & Charges                          |

In addition to assessing the existing conditions and issues at the Sedona Airport, an inventory of airport data and the surrounding environs was conducted. The existing airport facilities and socioeconomic data described in this chapter include:

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| ◆ Airport Classification              | ◆ Land Use                       |
| ◆ Airside Facilities                  | ◆ Airspace                       |
| ◆ Landside Facilities                 | ◆ Navigational Aids              |
| ◆ Socioeconomic and Aviation Activity | ◆ Ground Access and Auto Parking |

## 2.2 AIRPORT CLASSIFICATION

An airport can be classified by various airport elements such as types of aircraft operations, airport role, aircraft performance, and aircraft physical characteristics. This section describes the classification of Sedona Airport. These classifications serve to identify the various development needs of the airport in later elements of the master plan.

Sedona Airport is defined as a **General Aviation (GA)** airport. The types of aircraft operations that occur at Sedona Airport include business, instructional, personal, commercial such as tour and aerial photography, and some military.

Sedona Airport's role is identified as **General Utility**. This airport classification is one of three defined in the National Plan of Integrated Airport Systems (NPIAS) and other FAA publications.

- ➔ **Basic Utility.** This type of airport accommodates small, single-engine and small twin-engine airplanes, less than 12,500 lbs. gross weight, used for personal and business purposes. The length of the runway will determine how many types of these aircraft will be able to operate from it. Aircraft that will use this airport will typically have wingspans less than 49 feet in length and approach speeds of less than 120 knots. Precision instrument approach systems are usually not planned for runways in this category.
- ➔ **General Utility.** This type of airport accommodates all small airplanes and some larger aircraft weighing more than 12,500 lbs with wingspans up to 78 feet and approach speeds of 120 knots or less. Precision approach systems may be installed at airports at this category.
- ➔ **Transport.** This type of airport is designed for larger aircraft with higher approach airspeeds up to 166 knots. Typical wingspans vary from less than 49 feet up to 262 feet in length. Precision approach operations are normally planned for most Transport airports.

Based on a review of the type of aircraft operating at Sedona, the Aircraft Approach Category is B and the Airplane Design Group is I. This combination, B-I, forms the FAA alphanumeric Airport Reference Code (ARC) for Sedona. The approach categories and aircraft design groups, defined in FAA Advisory Circular 15/5300-13, Airport Design, are summarized as follows:

Aircraft Approach Categories		Aircraft Design Groups	
<u>Category</u>	<u>Approach Speed</u>	<u>Group</u>	<u>Wingspans</u>
<b>A</b>	Less than 91 knots	<b>I</b>	up to but not including 49 feet
<b>B</b>	91 knots or more but less than 121 knots	<b>II</b>	49 feet up to but not including 79 feet
<b>C</b>	121 knots or more but less than 141 knots	<b>III</b>	79 feet up to but not including 118 feet
<b>D</b>	141 knots or more but less than 166 knots	<b>IV</b>	118 feet up to but not including 171 feet
<b>E</b>	166 knots or more	<b>V</b>	171 feet up to but not including 197 feet
		<b>VI</b>	197 feet up to but not including 262 feet

## 2.3 LAND USE

The City of Sedona adopted an amendment to the Sedona Community Plan in June of 1998. The Community Plan is the basis for all land use regulation. The plan contains a detailed Land Use Plan which profiles existing land use and presents a plan to guide future development. The Airport Master Plan will integrate the community plans and land use designations in relation to the Sedona Airport. In this case, the master plan will indicate appropriate land use areas within and closely surrounding the airport based on current and forecast operations and facilities at the Sedona Airport. This section covers two land use areas: off-airport and on-airport land use. The off-airport area covers land adjacent to the airport spanning approximately five miles. The on-airport area is the land within the airport boundary.

### 2.3.1 Off-Airport

The Coconino National Forest is immediately adjacent and surrounds the airport completely. Beyond the forest boundary, in all directions from the Tabletop Mesa, there are residential areas. In this section, there were several published studies incorporated and evaluated regarding the land use issues surrounding the Sedona Airport.

Under Resolution No. 91.38, the City of Sedona's Mayor and Council established the Sedona Community Plan on November 26, 1991. The plan lists goals to ensure open areas and protection of surrounding natural environments and states, *"Minimize the negative noise and view impacts of development on the natural environment."* (Pg. 5-6)

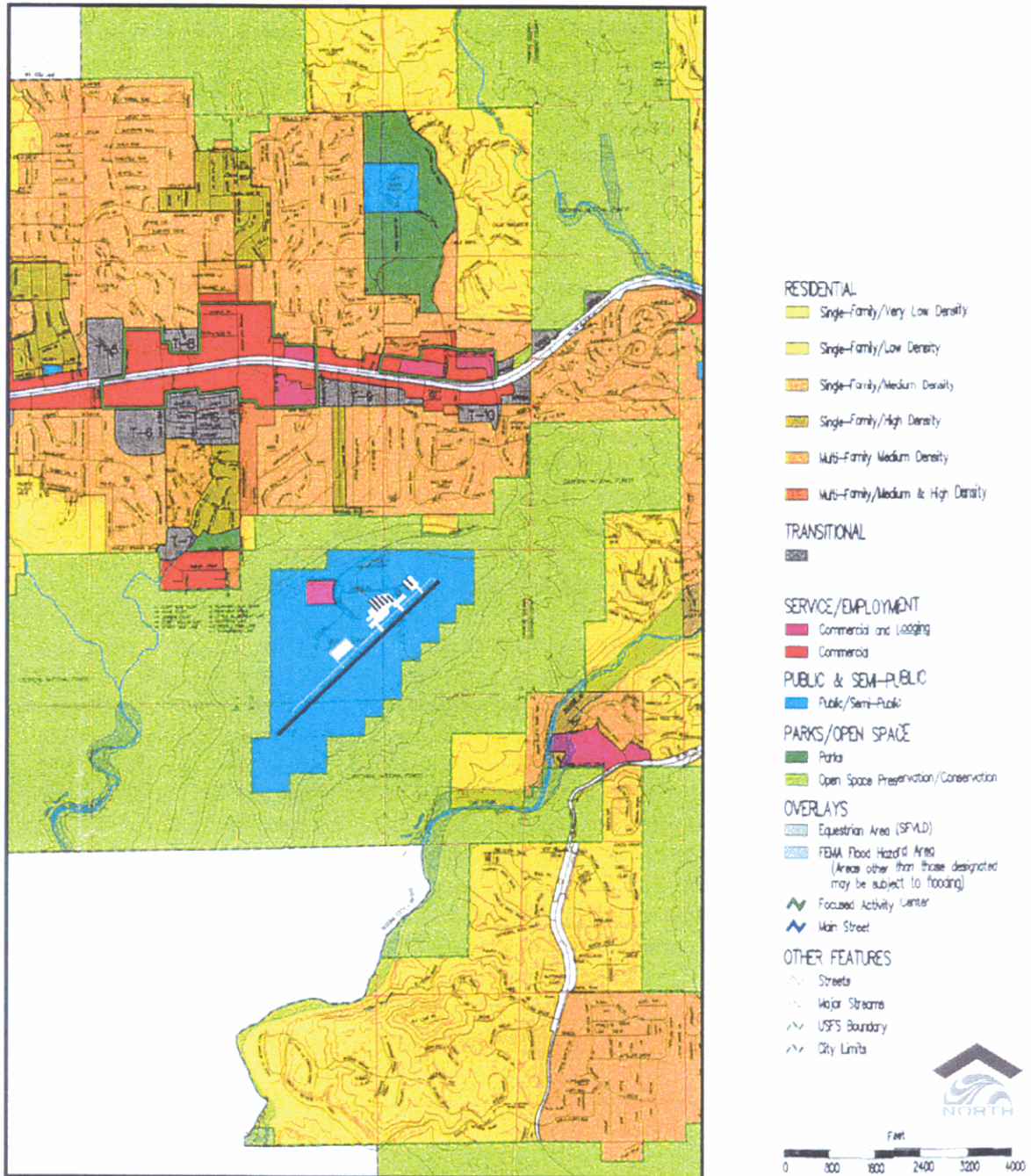
In addition, Goal 1.0 of the "Environmental Quality Element" states,

*"Even though the environmental characteristics (i.e., elevation, location, geography) of the airport assist in the reduction of noise, and the runway length limits the type and size of aircraft usage, continued daytime and nighttime operations over the City have generated complaints from residents regarding existing noise exposure."* (Section 11.1B, Sedona Community Plan).

In an effort to further evaluate the impact of aircraft traffic noise, the impact of the airport in the community, and to recommend possible mitigation opportunities, the Sedona Community Plan recommended the establishment of a City Airport liaison to work with the Airport Administration. In August 1998, the Sedona City Council appointed the liaison to participate in the Airport Master Plan Update and to continue working with the Administration and others in addressing the noise and air traffic issues. The current Land Use Plan for the City of Sedona is illustrated in Exhibit 2-1.

Land Use Plan for the City of Sedona

Exhibit 2-1



Completed in July 1997, the Coconino National Forest Service also had an Environmental Assessment for an Amendment to the Forest Plan by the United States Department of Agriculture that may impact the operations around the Sedona Airport. This study described the changes in operational planning with respect to aircraft overflight for the forest area surrounding the Sedona Airport. In the Environmental Assessment, the issue of aircraft overflight noise is listed in the proposed action section as follows:

*"The Forest Service will take steps within its authority including placing limits on aircraft used for commercial filming on National Forest lands and on commercial tour aircraft landing on National Forest land..."<sup>1</sup>*

In addition, in June 1998, under Amendment 12, the Forest Service developed specific management policies and actions to preserve the National Forest lands surrounding Sedona. According to the Decision Notice for Coconino National Forest Plan Amendment 12, the District Ranger had stated the following regarding the issues of flights over wilderness:

*"In requesting the FAA consider...sightseeing flights, I considered the current FAA guideline...Advisory Circular 91-36C, is inadequate to ensure the protection of natural quiet. This guideline asks pilots to fly no less than 2,000 feet above the surface...in "noise sensitive" areas, which include Congressionally designated Wildernesses...As the National Park Service has noted...2,000-foot limit reduces egregious impacts and may reduce complaints, but it does not effectively restore natural quiet."(PG.25) "The recommendations in Amendment 12 set forth ideas I will expect will restore, protect and improve conditions with regard to the impacts of aircraft noise...I believe it is important to find local solutions to address aircraft noise concerns. To do so, it will be necessary to involve FAA, SAA, citizens, the air tour industry and local municipalities to find...these solutions into effect. Consideration of special federal airspace regulations would require an FAA rule-making process which includes an impact analysis and appropriate public hearing."(Pg. 26)*

### 2.3.2 On-Airport

Within the airport property, there are a number of different aviation and non-aviation services and enterprises. The Sedona Airport Administration has jurisdiction to lease all airport property, with the exception of the Red Rock Memorial Lodge (leased from Yavapai County directly), to various organizations for a variety of aeronautical-related uses. The existing list of leases at Sedona Airport is presented in the following commercial building section of this report.

On-airport land use includes various airport elements such as the airfield, terminal area, tour operator facilities, general aviation facilities, and airport support (roadway access and circulation, airport maintenance, fuel storage, auto parking, etc.). Additional on-airport land use discussion is presented in the Airport Plans element of the Master Plan. Here, the implications of the Federal Airport Act (Section 16) restrictions at Sedona are provided.

The Sedona Airport property is covered under the Federal Airport Act (Section 16). Under this act, non-aviation use of airport property is not permitted. Further, airport property may not be transferred for the specific purpose of revenue production.

<sup>1</sup> Environmental Assessment, July 1997, pg. 96.

According to FAA Order 5190.6A, *Section 2-12 Covenants* and under Section 16 *"Imposed upon grantees certain obligations regarding the use of the lands conveyed and the airport involved"* are under the following restrictions:<sup>2</sup>

- a) The grantee will use the property interest for airport purposes and will develop that interest for airport purposes within 1 year as set forth in the deed.
- b) The airport, together with its appurtenance areas, building and facilities, whether or not on the land being conveyed, will be operated as a public airport on fair and reasonable terms and without economic discrimination.
- c) The grantee will not grant or permit any exclusive right forbidden by Section 308 of the Federal Aviation Act.
- d) Any subsequent transfer of the property interest conveyed will be subject to the covenants and conditions in the instrument of conveyance.
- e) *For Section 16* transfers the whole or any part of the property interest conveyed shall revert to the United States in the event the lands in question are not developed for airport purposes or used in a manner consistent with terms of the conveyance.

Additionally, the covenant in Section 16 also mentioned specific land uses for compatible non-aviation purposes until such time as the FAA decides the land is needed for an aviation purpose. It further states the income from such property must be applied to the development, improvement, maintenance, or operation of a public airport, as stated in the following excerpt from the FAA Order 5190.6A, *Section 4-20, Income Accountability*.

*"...As noted in paragraph 2-11, Section 16... do not permit the conveyance of land for the express purpose of generating revenue. However, if conveyed, they may with FAA consent be used for a non-aviation purpose which is completely subordinate to their prime purpose. As a condition for FAA consent, all income from such use must be applied to airport development and operation and there must be a periodic review of income and expenditure records to confirm that the revenues have been so applied." (Par 4-20, pg. 31)*

## 2.4 AIRSIDE FACILITIES

Airport facilities are usually classified as either Airside or Landside facilities for planning purposes. Airside facilities are those which are directly associated with aircraft operating to and from the airport. Runways, taxiways, navigational aids, and airport lighting are examples of Airside facilities. Exhibit 2-2 illustrates the existing Sedona Airport facilities.

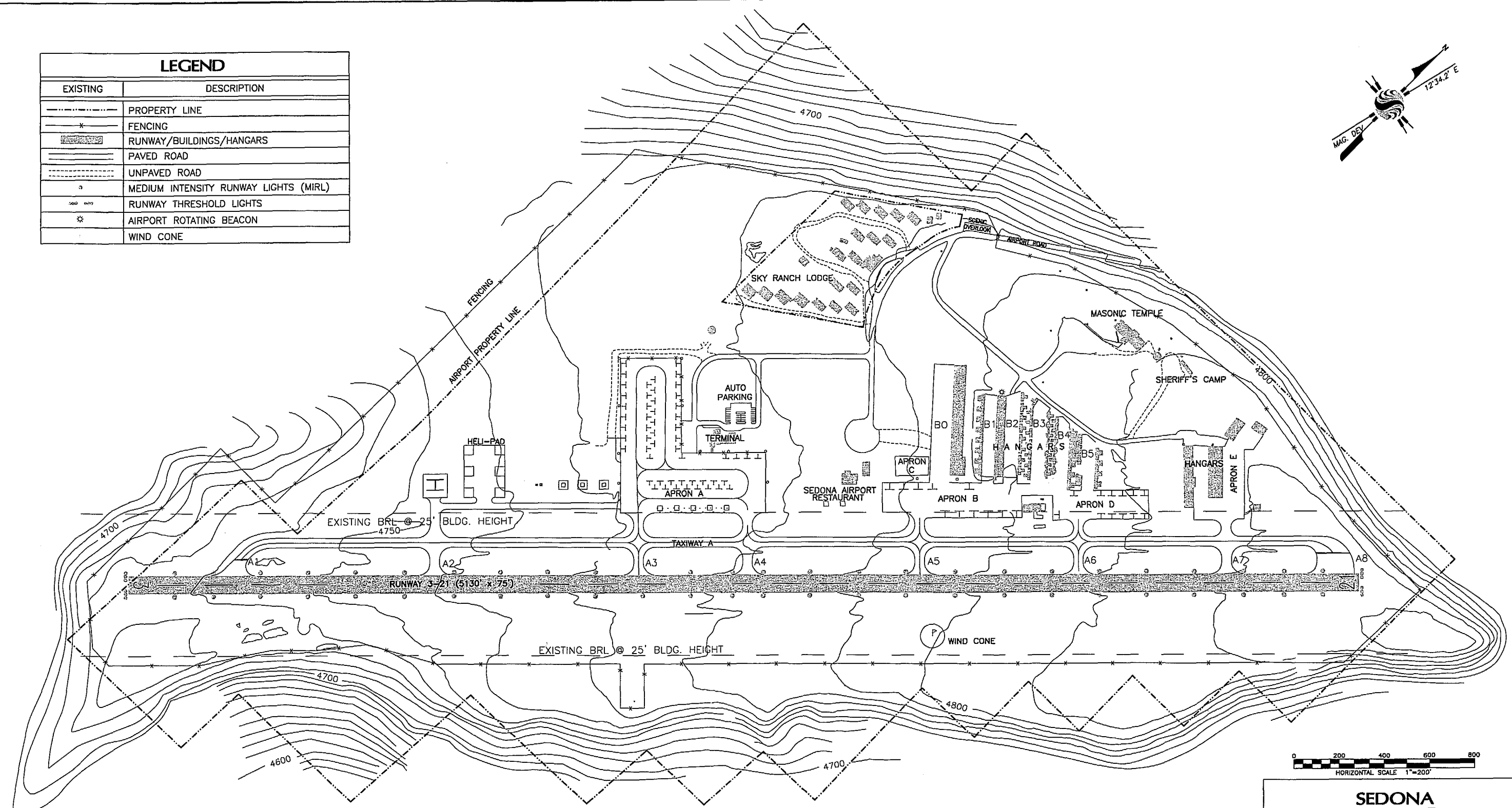
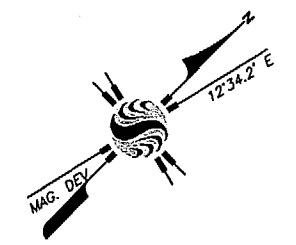
### 2.4.1 Runway

The existing runway 03/21 is 5,130 feet long by 75 feet wide. It is composed of an asphaltic concrete surface. The runway is a non-precision approach runway with visibility minimums as low as 3/4 statute mile. (See Exhibit 2-2, Existing Facilities Drawing).

<sup>2</sup> Airport Compliance Requirements, FAA Order 5190.6A, Oct, 2, 1989 pg. 5

According to the FAA pavement design procedures for light aircraft, the rated pavement strength for Runway 03/21 is 15,000 pounds single wheel loading (SWL), which accommodates most general aviation aircraft in Design Group I & II. Details on the pavement inventory and maintenance plan are described in the Pavement Maintenance Program located in Appendix A, as part of the Master Plan Study.

LEGEND	
EXISTING	DESCRIPTION
---	PROPERTY LINE
---	FENCING
---	RUNWAY/BUILDINGS/HANGARS
---	PAVED ROAD
---	UNPAVED ROAD
---	MEDIUM INTENSITY RUNWAY LIGHTS (MIRL)
---	RUNWAY THRESHOLD LIGHTS
---	AIRPORT ROTATING BEACON
---	WIND CONE



**SEDONA  
AIRPORT**

**SEDONA, ARIZONA**

**EXISTING FACILITIES**

SCALE 1"=200'	JOB NO. 28342608	DATE 6/99	EXHIBIT 2-2
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**Stantec Consulting Inc.**

7776 Pointe Parkway W, Suite 290  
Phoenix, Arizona 85044 USA

Phone: (602) 438-2200 Fax: (602) 431-9562

Furthermore, according to FAA guidelines for airports in Approach Categories A & B and within Design Groups I and II, the existing runway 03/21 with the length of 5,130 feet, serves more than 75 percent but less than 95 percent of the fleet of small airplanes at the temperature of 95<sup>0</sup> (degrees) F and the elevation of 4,827 feet.

#### **2.4.2 Parallel Taxiway**

The parallel taxiway (Taxiway A) is 4,600 feet long by 40 feet wide. It is composed of asphaltic concrete surface with pavement strength of 15,000 pounds Single Wheel Loading (SWL).

The current runway to taxiway centerline separation is 175 feet. However, in compliance with AC 150/5300-13 "Airport Design" and due to a recent increase in Group II aircraft operations, the parallel taxiway is currently being relocated 65 feet north for a 240-foot runway-to-taxiway separation to accommodate wider wingspans. In addition, the pavement strength is being upgraded to 30,000 pounds SWL with the capability for strengthening up to 60,000 pounds SWL.

#### **2.4.3 Taxiway Connections**

There are eight (8) 40-foot wide connecting taxiways identified as A1 to A8, between the runway and the parallel taxiway and six (6) 40-foot wide taxiway connections between the parallel taxiway and aircraft aprons.

#### **2.4.4 Lighting and Signage**

Runway 03-21 is equipped with a Medium Intensity Runway Lighting (MIRL) system. Runway 03 has Runway End Identifier Lights (REILs). The airfield signage consists of runway distance remaining marker signs and taxiway directional signs. While the parallel taxiway is not currently lighted, the taxiway relocation project under way will include the installation of a Medium Intensity Taxiway Lighting (MITL) system. Currently, all connecting taxiways have reflectors.

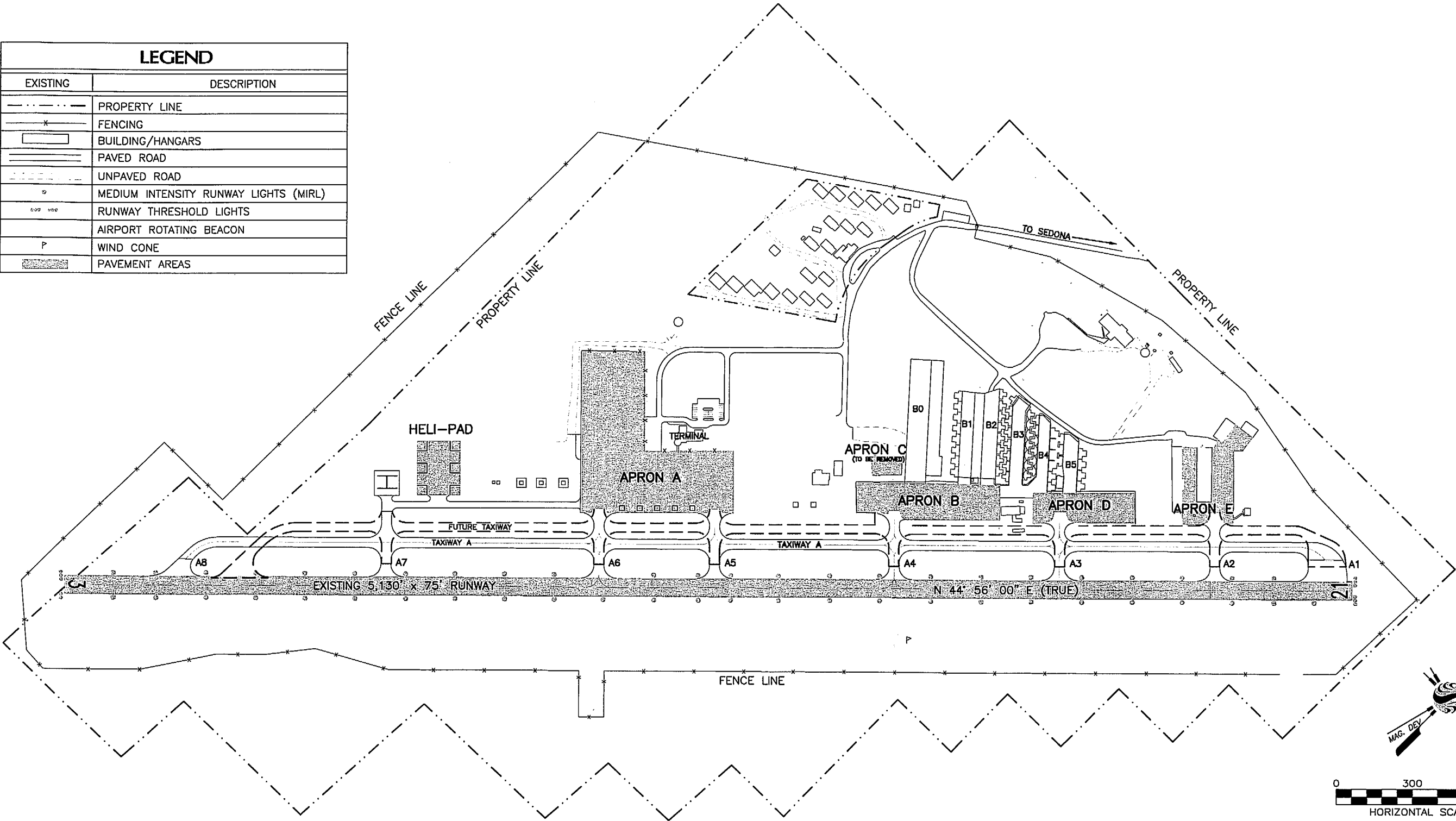
#### **2.4.5 Aircraft Apron and Parking Areas**

Aircraft parking aprons are located north of the taxiway. There are currently five aircraft parking aprons and a helipad at Sedona Airport. Four of the aprons are public transient aprons and one is proposed for removal or abandonment. The aprons are designated as Aprons A, B, C, D and E. See Exhibit 2-3 for details.

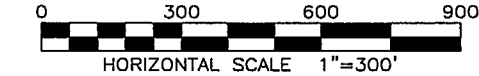
**The Helipad** is located west of Apron A and was constructed in 1998. The helipad is concrete and approximately 1,111 square yards. Additional helicopter parking is located adjacent to the Helipad with 4,156 square yards for six parking spaces.

**Apron A** is the southernmost and largest apron. It currently has 52 aircraft tiedowns. The apron is composed of asphalt surface and is approximately 27,778 square yards in size. Expansion of this apron (design completed) will connect an additional 5,556 square yards of apron space.

LEGEND	
EXISTING	DESCRIPTION
---	PROPERTY LINE
---	FENCING
---	BUILDING/HANGARS
---	PAVED ROAD
---	UNPAVED ROAD
---	MEDIUM INTENSITY RUNWAY LIGHTS (MIRL)
---	RUNWAY THRESHOLD LIGHTS
---	AIRPORT ROTATING BEACON
P	WIND CONE
---	PAVEMENT AREAS



NOTE: YAVAPAI COUNTY CONDUCTED AN AIRPORT BOUNDARY SURVEY IN JUNE, 1999, WHICH UNCOVERED A DISCREPANCY IN THE AIRPORT PROPERTY BOUNDARY AS DESCRIBED IN PREVIOUS DOCUMENTS AND PLANS. THESE PREVIOUS SOURCES REFLECTED THE ORIGINAL PROPERTY AS DEEDED TO THE COUNTY INCLUDING APPROXIMATELY 11.2 ACRES, WHICH THE SURVEY INDICATES IS U.S. FOREST SERVICE PROPERTY. BASED ON THE ASSUMPTION THE PREVIOUS DOCUMENTS WERE CORRECT, A SMALL PART OF THE SUBJECT PROPERTY CONTAINS FACILITIES WHICH WERE DEVELOPED OVER THE YEARS. THE PREFERRED AIRPORT DEVELOPMENT ALTERNATIVE (AND ALP) REFLECTS ADDITIONAL DEVELOPMENT ON PART OF THIS 11.2-ACRE PARCEL AND IS CONTINGENT UPON THE RESOLUTION OF ENCROACHMENT ON FOREST SERVICE PROPERTY. YAVAPAI COUNTY IS CURRENTLY WORKING WITH THE FOREST SERVICE TO RESOLVE THIS ISSUE.



SEDONA  
AIRPORT

SEDONA, ARIZONA

AIRCRAFT APRON AREAS

SCALE 1"=300'	JOB NO. 28342608	DATE 12/99	EXHIBIT 2-3
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Stantec Consulting Inc.

7776 Pointe Parkway W, Suite 290  
Phoenix, Arizona 85044 USA

Phone: (602) 438-2200 Fax: (602) 431-9582

**Apron B** is the next apron east from Apron A. The apron is composed of asphalt surface and is 8,100 square yards in size with 11 aircraft tiedowns.

**Apron C** is northwest of Apron B. The apron is composed of asphalt surface and is 12,800 square yards.

**Apron D** is east of Apron B and is composed of asphalt surface. The apron is 5,400 square yards with 12 aircraft tiedowns.

**Apron E** is located east of Apron D. This apron is composed of asphalt surface and is approximately 3,561 square yards with 11 aircraft tiedowns.

#### **2.4.6 Safety Areas**

Beyond the runway ends, the ground slopes away and down the mountain. Thus only part of the runway safety areas (RSA) are accommodated. The taxiway safety area (TSA) is fully accommodated.

#### **2.4.7 Runway Protection Zones**

The existing airport layout plan prepared in 1992 has runway protection zones (RPZs) that begin 200 feet beyond the thresholds of the respective runways and are 1,000 feet long with 250 feet inner width and 450 feet outer width (17.217 acres). These RPZs serve small aircraft (12,500 lbs. or less).

#### **2.4.8 Building Restriction Line**

The FAA recommends that the Building Restriction Line (BRL) encompass the runway protection zones, the runway visibility zone, and all airport areas with less than 35-foot clearance under the FAR Part 77 surfaces. The current Building Restriction Line (BRL) is located with a 25-foot clearance.

#### **2.4.9 Obstructions to Air Navigation**

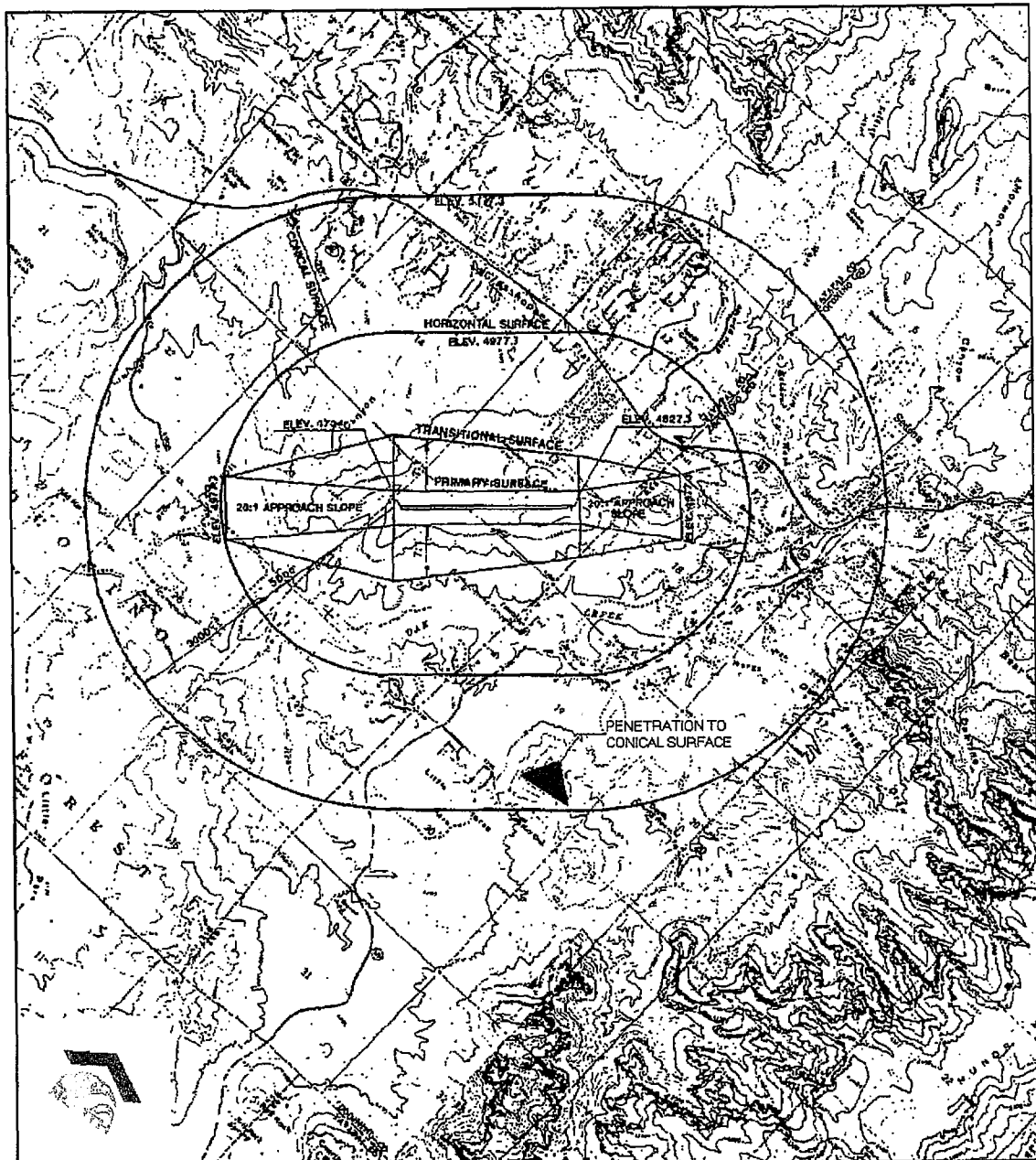
The Federal Aviation Administration (FAA) conducts aeronautical studies on obstructions, which examine their effect on such factors as aircraft operational capabilities, electronic and procedural requirements, and airport hazard standards.

Through Federal Aviation Regulation (FAR) Part 77 and airport zoning ordinances, the FAA developed height limiting criteria in the vicinity of airports to prevent any natural, or man-made structure, or object from interfering with the safe and efficient operation of the airport.

As indicated in Exhibit 2-4, the prior 1992 Master Plan showed an area of terrain penetrating the conical surface southeast of the Sedona Airport. The terrain is not within the flight pattern and does not seem to be of hazard to aircraft operating within the airspace. However, in the event an obstruction penetrates the surfaces described in FAR Part 77, a FAA Form 7460-1 application for an airspace study must be filed with the FAA. In turn, the FAA will perform an analysis and provide a record of decision regarding the penetration. Currently, there is no official record of decision from the FAA regarding the identification of terrain as an obstruction for Sedona under the standards of Federal Aviation Regulations (FAR), Part 77.

## Airport Terrain

Exhibit 2-4



Source: Western Regional Climate Center, January 1999; NOAA - Data Center, February 1999



### 2.4.10 Reserved Airspace

There are no Military Operating Areas (MOA) overlapping the Sedona Airport area, however two (2) MOAs are located southwest of Sedona, Bagdad 1 and Gladden 1. These areas are for military use and under FAR 73, Subpart B – Restricted Areas<sup>3</sup>, military aircraft operations are restricted between the designated altitudes and during the time of designation. Other aircraft may enter the area above the restricted altitudes or with advance permission from the controlling agency and continual contact with Albuquerque Air Route Traffic Control Center (ARTCC) while operating in the MOA. See Exhibit 2-5.

### Airport Airspace

Exhibit 2-5



<sup>3</sup> FAR/AIM 99 – FAR 73, Special Use Airspace, pg. F-179

#### **2.4.11 Navigational Aids**

Sedona Airport is equipped with an Abbreviated Visual Approach Slope Indicator (AVASI-L) system, which aids pilots in determining the proper glideslope for landing. There is a Non-Directional Beacon (NDB) located off the airport for a Global Positioning Approach – Alpha (GPS-A), which is currently inoperative. Both the Drake, Very High Frequency Omnirange with Tactical Air Navigation (VORTAC) and Flagstaff, Very High Frequency Omnirange/Distance Measuring Equipment (VOR/DME) stations are also used for air navigation to Sedona Airport.

#### **2.4.12 Flight Pattern and Noise Abatement Procedures**

The typical flight pattern at Sedona Airport is established at 5,827 feet mean sea level (MSL), as shown in Exhibit 2-6. The traffic pattern is a “*standard left*” on both Runway 03 and 21 approaches.

There are currently noise abatement procedures established at the airport and published for pilot reference. The following is a list of the current noise abatement procedures published by the Sedona Airport Administration (SAA).

##### **NOISE ABATEMENT PROCEDURES**

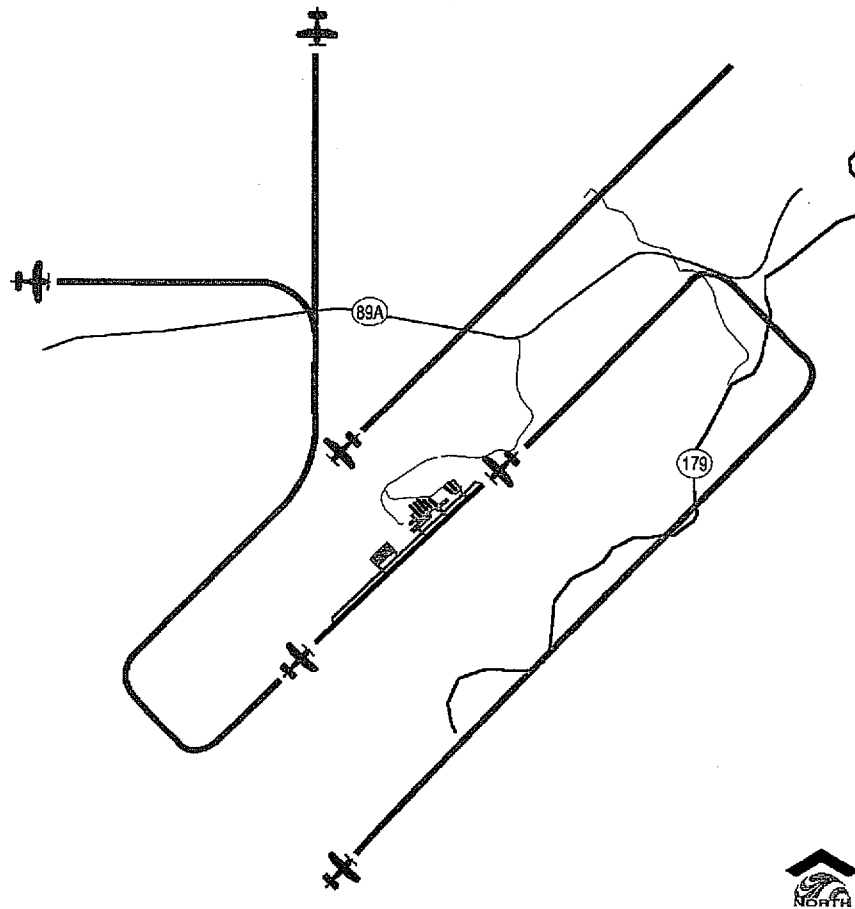
1. Recommended runway below 10 Knots:
2. **ARRIVALS:** Runway 03 (UPHILL)
3. **DEPARTURES:** Runway 21 (DOWNHILL)
4. All landings, takeoffs and touring aircraft, for safety’s sake, “Heads Up” and use your radio.
5. No scenic flights below 6,500’ MSL.
6. JETS: no late night departures or arrivals.
7. No mid-field or intersection departures.
8. No touch and go or stop and go operations.
9. Climb as high as possible before leaving airport boundaries, consistent with safety.
10. Fly standard left patterns, no low approaches, no straight-ins.
11. Follow the VASI consistent with safety; use best rate of climb (Vy) on takeoff for noise abatement.
12. Administrative runway weight restriction is 30,000 pounds for dual wheels.
13. Compliance with airport noise abatement procedures is at the pilot’s discretion. Safety always comes first.

---

**Flight Patterns**

---

Exhibit 2-6

**2.4.13 Communication Centers**

The communication centers used in the vicinity of Sedona Airport include Albuquerque Air Route Traffic Control Center (ARTCC), Prescott Flight Service Station and a local unicom at 122.8 frequency.

- The ARTCC in Albuquerque, NM provides radar assistance and advisories to pilots who request this service.
- The Prescott Flight Service provides service on weather, flight plans advisories and relays messages to other stations.

**2.4.14 Visual Aids and Wind Indicators**

A rotating beacon is situated on top of one of the hangars. There are two-lighted wind direction indicators, one located at the heliport and the other located at mid-field. There are two unlighted wind direction indicators, one at the approach end of Runway 03, and the other at the north end, on top of a hangar building.

## 2.5 LANDSIDE FACILITIES

Landside Facilities consist primarily of facilities required to serve aircraft, pilots and passengers while they are at the airport. Landside Facilities typically consist of terminal buildings, hangars, aircraft parking aprons, fuel storage facilities and automobile parking.

### 2.5.1 Perimeter Fence

The airport is completely enclosed by an 8-foot high chain link fence topped with 3 wire interwoven with 2-strand barbed wire. The fence does not always follow the airport boundary due the rugged terrain of the mountain slopes making it impractical to place the fence on certain extreme portions of the property.

As a result of comparing previous Airport Layout Plans, Master Plans (dated 1981 & 1992), legal descriptions and a property survey performed by Yavapai County, an apparent discrepancy in a portion of the western boundary of the airport was discovered. The survey revealed that approximately 11.2 additional acres were included in the airport property than what the original property deed indicates. This results in the surveyed western airport boundary being further to the east than shown in the previous documents. Yavapai County is currently working with the affected parties to resolve the issue. (See ALP sheet 7, Airport Property Map)

### 2.5.2 Terminal Building

Sedona Airport's terminal building was constructed in 1991 and is approximately 4,600 square feet in size. The building accommodates the following:

- |  |  |
|--|--|
| ■ Lobby/Reception area                               | ■ Conference room                                      |
| ■ Airport manager's office and administrative office | ■ Three (3) offices available for leasing              |
| ■ Flight planning room                               | ■ Mechanical room                                      |
| ■ Storage room                                       | ■ Line services and fueling fixed based operator (FBO) |
| ■ Restrooms  |  |

### 2.5.3 Hangars

There are a total of 79 hangars (11-Box, 10-Nested 'Ts', 50-Portable 'Ts', and 8-Corporate Hangars) at Sedona Airport. As previously shown in Exhibit 2-3, these facilities are located east of the Main Terminal Building. Twenty-one (21) hangars, including eight (8) corporate hangars are owned and leased by the Sedona Airport Administration and there are fifty-eight (58) privately owned hangars. The size and types of hangars owned by Sedona Airport Administration are listed below:

- Ten (10) condo nested T's @ 1,150 square feet.
- Eight (8) box hangars @ 1,848 square feet.
- One (1) box hangar @ 3,023 square feet.
- One (1) box hangar @ 3,315 square feet.
- One (1) "T" Hangar @ 1,309 square feet.
- Fifty (50) pads for privately-owned Portable Single Hangars.
- Eight (8) Corporate Hangars

### 2.5.4 Fixed Based Operators and User Facilities<sup>4</sup>

The following is a list of current tenants, types of operations and lease terms at Sedona Airport.

Name of Operator	Type of Operation and Lease Terms
AHA – Arizona Helicopter Adventures	<ul style="list-style-type: none"> <li>Operating tours and charter with 1 aircraft</li> <li>Occupies 61,500 square-foot space, lease expires June 2000</li> </ul>
AV- Aero Vista	<ul style="list-style-type: none"> <li>Operating tours, charter, rentals and instruction with 4 aircraft</li> <li>Leases 1,106 and 374 square-foot buildings, lease expires March 2000</li> </ul>
Canyon Mesa Aviation	<ul style="list-style-type: none"> <li>Operating an aircraft maintenance facility</li> <li>Occupies a 4,843 square-foot building, month-to-month lease since January 1998</li> </ul>
RRBP – Red Rock BiPlanes	<ul style="list-style-type: none"> <li>Operating tours with 2 aircraft</li> <li>Leases 317 square-foot area, lease expires March 1999*</li> </ul>
SKD – Sky Dance	<ul style="list-style-type: none"> <li>Operating tours and charter with 2 aircraft</li> <li>Leases 192 square-foot area, expires March 1999*</li> </ul>
SKT – Sky Treks	<ul style="list-style-type: none"> <li>Operating tours and charter with 2 aircraft</li> <li>Leases 29 square-foot area, expires March 1999*</li> </ul>
WWA - West Wind Aviation	<ul style="list-style-type: none"> <li>Operating tours &amp; Charter with 2 aircraft</li> <li>Leases 180 square-foot space in the terminal area, lease expires April 1999*</li> </ul>

\* Note: SAA renegotiating lease at this time.

### 2.5.5 Other Commercial Uses and Buildings

The following is a list of current commercial tenants, types of operations and lease terms at Sedona Airport.<sup>5</sup>

Name of Company	Location and Lease Terms
Arizona Jeep and Car Rentals	<ul style="list-style-type: none"> <li>Located in the terminal</li> <li>Leases a 105 square-foot space with lease expiring January 2000</li> </ul>
Sedona Airport Restaurant	<ul style="list-style-type: none"> <li>Located adjacent to the Terminal Building</li> <li>Lease covers 3,000 square-foot building with lease expiring in May 2006</li> </ul>
Civil Air Patrol Office	<ul style="list-style-type: none"> <li>Owns a 2,100 square-foot building located toward the north end of the airport</li> <li>Lease expires January 2005</li> </ul>
Fire Department and U.S. West Comm. Antennae	<ul style="list-style-type: none"> <li>Located in the east side of the airport on a 2,000 square-foot parcel</li> <li>Lease expires in November 2001</li> </ul>

<sup>4</sup> Source: Sedona Airport Administration and Yavapai County

<sup>5</sup> Source: Sedona Airport Administration and Yavapai County

Name of Company	Location and Lease Terms
Cellular One Communications Antennae	<ul style="list-style-type: none"> <li>Leases a 1,500 square-foot space next to the Fire Department Tower</li> <li>Lease expires in August 2017</li> </ul>
Red Rock Memorial Lodge	<ul style="list-style-type: none"> <li>Leases the largest area, approximately 9.8 acres</li> <li>Lease expires in June 2014.</li> </ul> <p><b>Note:</b> There is a Masonic Temple and a paved auto parking area. The Lodge's lease remains with Yavapai County</p>
Sky Ranch Lodge	<ul style="list-style-type: none"> <li>The lodge leases 6.1 acres containing 23 buildings and a swimming pool area</li> <li>This motel has 94 units and a lease (with an option for additional buildings), which expires in May 2006</li> </ul>
The Yavapai County Sheriff	<ul style="list-style-type: none"> <li>Leases one acre for conducting departmental business. Currently, the department has a mobile home at the site with an indefinite lease</li> </ul>
Main Terminal Building	<ul style="list-style-type: none"> <li>115 square-foot space vacant</li> </ul>
Commercial Activity Building	<ul style="list-style-type: none"> <li>99 and 90 square-foot areas available</li> </ul>

### 2.5.6 Aircraft Fuel Facilities

At present, aircraft fuel facilities at Sedona Airport are owned and operated by the Sedona Airport Administration and include two (2) 10,000-gallon aboveground storage tanks, one for Jet A and the other for AVGAS.

### 2.5.7 Access Road

As shown in Exhibit 2-7, the turnoff for Airport Road is approximately one mile west of uptown Sedona on SR 89A. Airport Road provides two alternative routes to the airport:

- ① The main route is to the southeast, which proceeds directly to the terminal building area and to the restaurant.
- ② The second route from Airport Road is to the east and goes to the main hangar areas in the center and the northeast part of the airport.

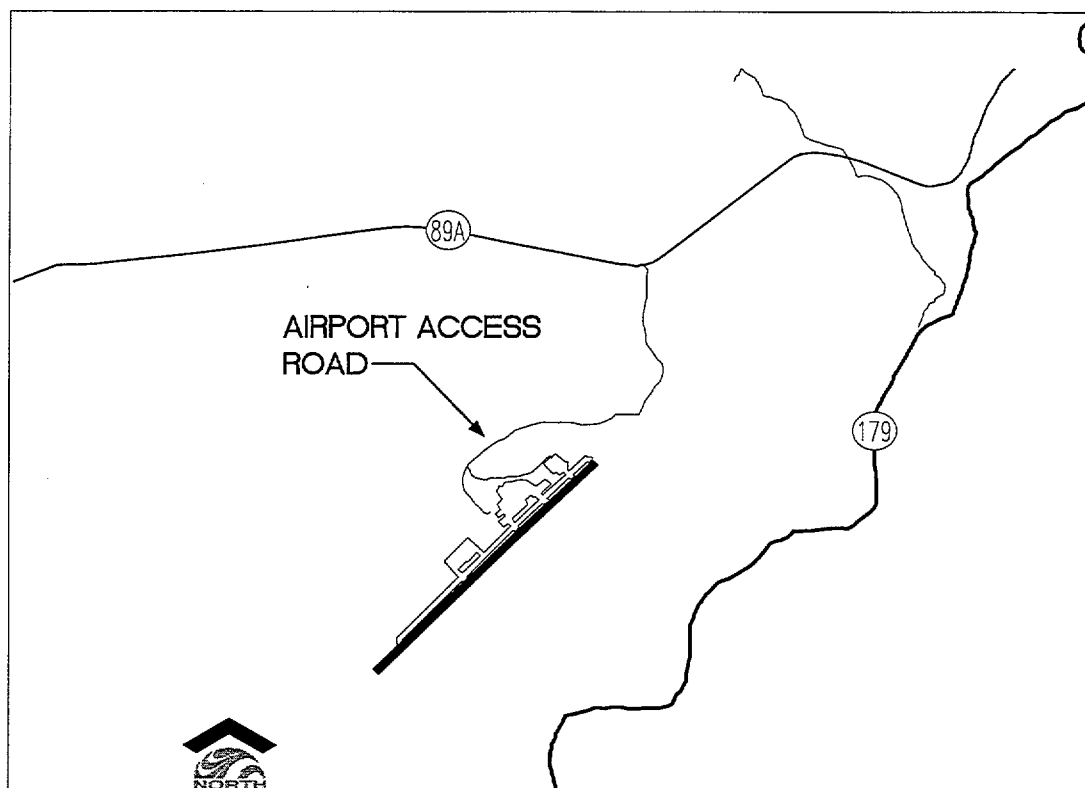
Yavapai County widened the two-lane 'Airport Road' in 1991 and installed a guardrail for improved safety and traffic flow.

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**Airport Access Road**

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Exhibit 2-7

**2.5.8 Auto Parking**

The automobile parking areas at Sedona Airport are located in the following areas:

- To the right off Airport road toward the entrance of the airport, there are 11 parking spaces associated with the scenic overlook area.
- The main public parking area is adjacent to the terminal building. There are a total of 29 spaces.
- There are also 18 paved spaces located at the entrance to apron E and next to aircraft hangars.
- The Sedona Airport Restaurant also has a large unmarked parking area on an adjacent dirt lot.

### 2.5.9 Utilities

Sedona Airport tenants and users have access to and/or benefit from services provided by the following list of local companies through the Sedona Airport Administration. The utilities used on-airport are as follows:

**Electric - Arizona Public Service (APS).** The airport is equipped with three-phase electric power.

**Gas - Graves Company.** There are no natural gas lines. Each facility at the airport has its own propane gas system to provide heat.

**Water - Oak Creek Water Company #1.** Sedona Airport has a water system for Phase 1 Fire Protection, which was completed in March 1992. This system provides 100,000 gallons in storage through a separate set of water lines, provides domestic potable water. The airport drains generally from northeast to southwest. There are numerous culverts on the airport, including a series of culverts under connector taxiways, between the parallel taxiway and runway, and under the taxiway connections to the aprons.

**Sewer and Sanitation - Individual Facilities.** Most of the buildings at the airport have sewage facilities, which drain to individual septic tanks and seepage pits.

## 2.6 SOCIOECONOMIC AND AVIATION ACTIVITY

A variety of historical and forecast socioeconomic data for the City of Sedona, Yavapai County, and Coconino County were collected for use in various elements of the Master Plan Study. This information is essential in determining aviation service level requirements, as well as forecasting the number of based aircraft and aircraft activity at the airport.

The aviation forecasts are normally directly related to the population base, economic activity in the area, and the ability of the region to sustain a strong economic base. This type of data provides valuable insight into the dynamics and character of the community, and how these characteristics will affect future aviation demands. Aviation demands will in turn have a direct effect on the facilities and services required at the airport.

This section serves as an inventory of the community to identify pertinent socioeconomic factors, which are likely to affect air transportation demand. These factors include economic indicators, local and statewide growth patterns, and population characteristics, distribution, and numbers.

### 2.6.1 Population Data

The Sedona Airport service area extends beyond the municipal boundary of the City of Sedona. The service area extends well into the rural areas of Yavapai County and Coconino County. There is also some overlap of service areas with the other airports in the region due to the availability of specific services at other airports. Therefore, a single population base is not considered a reliable indicator of the people being served by the airport. As shown in **Table 2-1**, the population data was obtained from the latest figures provided by the Arizona Department of Commerce, *Community Profile Sedona*.<sup>6</sup>

<sup>6</sup> Source: Arizona Department of Economic Security and U.S. Census Bureau, Dec 1996

## Population Data

Table 2-1

Population in area(s) of	1980	1990	1996 <sup>2</sup>	1990-1996 Growth
City of Sedona <sup>1</sup>	5,481	7,720	9,235	20%
Coconino County	75,008	96,900	113,475	17%
Yavapai County	68,145	108,500	134,600	25%
Arizona	2,716,546	3,680,800	4,462,300	22%

<sup>1</sup>The City of Sedona reflects the population in the area within the incorporated city limits.

<sup>2</sup>1997 DES figures (published following the original preparation of this table) are as follows:

City of Sedona - 9,446, Coconino County - 115,920, Yavapai County - 139,480, Arizona - 4,595,379.

As indicated above, the Sedona area has continued to grow and is aligned with the growth trend for the state. Arizona's tourist market continues to flourish; however, the impact of the continued growth of large business communities, centered in high-tech industry, has generated higher growth in population.

The population growth in this region will have a direct bearing on the need for additional aviation facilities and services. People want and need air transportation, air transportation requires aircraft, and aircraft and passengers require airport facilities and services. Therefore, the need for additional airport facilities will certainly be affected as the population within Yavapai and Coconino Counties continues to grow. In addition to the permanent resident population, there is a significant seasonal population that must also be considered. This seasonal population consists largely of residents from the Phoenix and Tucson areas that have second homes in the Red Rock Area. These seasonal residents not only have an impact on the local economy, they also contribute to the need for aviation facilities and services. Table 2-2 reflects the permanent and seasonal population for Sedona as indicated in the "Sedona Community Plan" dated June 8, 1998.

## Permanent and Seasonal Population for Sedona

Table 2-2

Population	1997	2000	2005	2015
Sedona Permanent Residents <sup>1</sup>	9,466	10,099	11,230	13,521
Sedona Seasonal Residents <sup>2</sup>	1,656	1,704	1,743	2,158
Sedona Year Round Population <sup>3</sup>	--	10,321	11,652	14,317

<sup>1</sup>DES Subcounty Projections, May 1997

<sup>2</sup>Projections are derived from Seasonal housing units (estimated 828 housing units x 2 persons per household) for July 1997 from the Sedona Community Plan, pg. 3-3, Table 2, June 8, 1998-Resolution #98-32.

<sup>3</sup>Projections are from the Sedona Community Plan.

Furthermore, Sedona's close proximity to the Greater Phoenix Area continues to impact the increase of residents to the area. The area's scenic and cultural attractions also continue to stimulate visitor interest and create a more viable real estate market. In turn, the housing in the Sedona community has increased 12.8 percent in the last 10 years with 73.1 percent owner-occupied homes, as indicated in the 1995 Special Census (DES).<sup>7</sup>

## 2.6.2 Economic Base and Employment

Tourism forms Sedona's economic base, with the National Forest Service estimating that more than 3.5 million people visit the area annually.<sup>8</sup> Continued visitor interest has stimulated the retirement and vacation home acquisition and construction industry.

Sedona is located in both southern Coconino and northern Yavapai Counties and is completely surrounded by the Coconino National Forest. **Table 2-3** summarizes the last decade of employment statistics for Sedona and its respective area counties.

**Labor Growth Rate from 1981-1996**

Table 2-3

Labor Force Data for Sedona*	1981	1990	1996
Employed	2,287	3,200	4,369
Labor Force (civilian)	2,386	3,305	4,477
Average Annual Growth	---	2.8%	4.4%
Labor Force Data for Coconino County **	1981	1990	1996
Employed	31,075	41,250	46,425
Labor Force (civilian)	34,000	44,350	42,125
Average Annual Growth	---	2.3%	-5.3%
Labor Force Data for Yavapai County **	1981	1990	1996
Employed	29,250	38,350	41,250
Labor Force (civilian)	31,100	40,300	44,575
Average Annual Growth	---	2.3%	9.6%

\* Source: Community Profile, Arizona Department of Economic Security.

\*\*Arizona Department of Economic Security.

The employment trend in Sedona follows the employment history of Yavapai and Coconino counties, which has steadily increased the last 10 years. The employment trends can be attributed directly to the type of businesses located in the Sedona Area. Most businesses in the community revolve around the arts and recreation. There are over 40 galleries in Sedona and it is consistently

<sup>7</sup> Source: Arizona Department of Economic Security

<sup>8</sup> Source: 1997 Community Profile, Arizona Department of Commerce

rated as a “premier destination for art lovers from all over the world.”<sup>9</sup> Recreational facilities and activities are also available in a variety of levels. The ambiance of a small town is typified by the influence of small owner-operated businesses serving guests and the community. In addition, the area also acts as a hub for visitors in Northern Arizona, due to its proximity to major sites such as the Grand Canyon, Jerome, Meteor Crater and Sunset Crater.

### 2.6.3 Airport Activity

In addition to the physical facilities inventory for Sedona Airport, the aviation activity levels define the airport and its role in the community.

#### Based Aircraft and Fleet Mix

Historical data collected on based aircraft, fleet mix, and aircraft operations are summarized below. The data collected in **Table 2-4** are based on airport manager interviews of current events and the 1982 Master Plan.

**Number of Based Aircraft at Sedona Airport**

Table 2-4

Based Aircraft			
1991	1992	1996	1997
94	92	101	103
Non-Hangared		Hangared	
<b>Full-time</b>		69 single engine	
18 single engine		6 twin engine	
1 helicopter		2 helicopters	
<b>Part-time</b>			
6 single engine			
1 twin engine			
<b>TOTAL BASED AIRCRAFT</b>		<b>103</b>	

Note: 1998 Based Aircraft @ 103 (Source-Sedona Airport Administration)

The non-hangared based aircraft numbers consist of monthly tie-down renters and the part-time based aircraft represent the seasonal Sedona residents with second homes in the area.

Another component to establish airfield requirements and capacity is fleet mix. By design standards set forth by the FAA, the aircraft mix influences many different elements in the study and further discussion will be included in following sections. The current fleet mix is listed in **Table 2-5**.

<sup>9</sup> Community Profile, Arizona Department of Commerce.

### Based Aircraft by Type

Table 2-5

Aircraft Type	Number of Aircraft
Helicopter	3
Single Engine	93
Twin-Engine	7

Aircraft registration data compiled by the State of Arizona suggests that the numbers of active aircraft at Sedona are less than the total number of based aircraft. According to ADOT's 5150-Registered Aircraft Report, there were 64 registered at Sedona in 1997, compared with the Sedona Airport Administration report total of 103 based aircraft. The difference between these numbers reflects aircraft registered in other states, inactive aircraft, and aircraft that have not yet flown (i.e. kit aircraft, homebuilt).

### Aircraft Operations

The aircraft operations are the total number of landings and takeoffs that occur during any given year at Sedona Airport. In 1997, the airport accommodated approximately 40,897 operations and 103 based aircraft. The history of the growth in operations for the airport is listed below in **Table 2-6**. This summarizes the total operations that have occurred in the previous seven years.

### Aircraft Operations at Sedona Airport

Table 2-6

1991	1992	1993	1994	1995	1996	1997
26,602	26,036	27,309	28,583	29,856	33,543	40,897

### Enplanements

Commuter airlines have had opportunities to provide regularly scheduled air service to Sedona Airport. Golden Pacific Airlines was the original scheduled service and was discontinued in 1988. Air Sedona, (later Scenic Airlines) a charter and tour service, provided scheduled service (**Table 2-7**) to Phoenix from 1984 until August 1995. Although discontinued, further discussion of scheduled service is provided in subsequent chapters.

### History of Air Service

Table 2-7

Year	Total Enplanements	Year	Total Enplanements	Year	Total Enplanements
1984	3,656	1988	4,748	1992	3,528
1985	4,548	1989	1,518	1993	3,175
1986	6,730	1990	3,651	1994	2,457
1987	6,730	1991	3,345	1995	1,868

## 2.7 CLIMATE

Weather conditions play an important role in the planning and development of airport facilities. Temperature is an important factor in determining runway length and aircraft performance. Wind speed and direction are used in determining optimum runway orientation and may influence runway width. The percentage of time that visibility is impaired due to cloud coverage or other atmospheric conditions is a major factor in determining the need for navigational aids and airport lighting systems.

The climate of the Sedona area is very good for general aviation flying. Annual precipitation is slightly more than 14 inches with most of this falling in relatively short periods in the summer months during the thunderstorm season. In this season there are periods of low visibility, due to heavy rain and high winds during thunderstorm passage. Occasional ground fog may also occur during the morning hours in the fall and spring months. Table 2-8 shows average daily temperatures and average total precipitation by month for the year 1997.

1997 Weather Summary—Sedona Airport

Table 2-8

Weather –Sedona Airport		Avg. Daily		Avg. Total
Year 1997		Temperature (°F)		Precipitation
Month	Max.	Min.	(inches)	
January	55	29.7	1.7	
February	59.1	32.2	1.54	
March	63.3	35	1.67	
April	72.1	42.1	1.17	
May	81.2	49.2	0.56	
June	90.7	57.2	0.49	
July	95.1	65.1	1.89	
August	92.3	63.7	2.42	
September	88.3	58.1	1.51	
October	77.9	48.5	1.16	
November	65.1	36.9	1.32	
December	56.4	45.7	1.73	
YEAR	74.7	47	14.43	

Note: Average total snow, sleet & hail: 8.8 inches per year (30 year average)

Source: U.S. Weather Bureau & Sedona On-Line

## **2.8 WIND ANALYSIS**

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The wind pattern at Sedona Airport has generally been calm from sunset to sunrise with light to moderate north and northeasterly winds during daylight hours. Local winds are typically out of the north and northeast. The current wind patterns for Sedona Airport are compiled and presented in Appendix B, Inventory section.

Wind data used for Sedona Airport was generated for one year 1996-1997, from an Automated Wind Observation Station (AWOS) located at Sedona Airport. According to the windrose, wind coverage for the Runway 03-21 is approximately 96 percent at 12 mph and 98 percent at 15 mph. Although the FAA requires ten or more years of data, there was no wind information available specifically for Sedona.

According to the Western Regional Climate Center of NOAA, the closest airport with wind data available for five or more years is Flagstaff, Pulliam Airport. However, terrain and elevation differences between Sedona and Flagstaff are so significant that the most current data from the AWOS system at Sedona Airport was used.

## **2.9 SUMMARY**

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This chapter has examined existing conditions, factors and issues, with respect to existing airport facilities (both airside and landside), airspace and air traffic, socioeconomic characteristics, existing land use and climate.

The next chapter will examine the current aviation demand being experienced by the airport and how this demand can be expected to change in the future. Projections of aviation activity through the year 2017 will be presented in order to provide the necessary guidelines so important for long-range planning.